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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,673	07/28/2004	Wen-Kei Lee	WISP0051USA	4672

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EXAMINER

NGUYEN, HIEP

ART UNIT	PAPER NUMBER
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2816

DATE MAILED: 03/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/710,673	LEE ET AL.	
	Examiner	Art Unit	
	Hiep Nguyen	2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2006.
- 2a) ☐ This action is **FINAL**.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-10 and 12-17 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-10 and 12-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 - Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 - Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some * c) ☐ None of:
 - 1. ☒ Certified copies of the priority documents have been received.
 - 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 - * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3-10 and 12-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction and/or clarification is required.

Regarding claim 1, the recitation “an AND gate ...for preventing the oscillation signal produced by the oscillator from being provided to the boosting circuit” on lines 8-12” is indefinite because it is misdescriptive. Figures 2-4 of the present application show that the output (Output) of the feedback control circuit (24) only turns transistor (Q1) on to disable the boosting circuit. The output (Output) does not control switch (SW1) to disable the oscillator circuit (27) as recited.

Regarding claims 4 and 12, the recitation “a frequency control circuit for adjusting the frequency of the oscillating signal” is indefinite because it is misdescriptive. Figure 4 of the present application shows that the oscillator (27) has no adjustment because switch (SW1) only connects/disconnects the oscillator output to the input of the AND gate.

Regarding claims 6 and 14, the recitation “ a second end of the third resistor is electrically connected to a negative pole of the diode and a positive pole of the diode is electrically connected to both the second end of the first resistor...” is indefinite because it is misdescriptive. Figure 4 of the present application shows that the a second end of the third resistor (R1) is electrically connected to a positive pole (anode) of the diode (D4) and a negative pole (cathode) of the diode is electrically connected to both the second end of the first resistor (R3).

Regarding claim 10, the recitation “when the output voltage is lower than a predetermined voltage, with the oscillator generating a periodic pulse signal **for** controlling a transistor” on lines 8-9 is indefinite because it is not clear as to the “output voltage” or the “oscillator generating a periodic pulse signal” controls the transistor. The recitation “ when

Art Unit: 2816

the output voltage...for turning off the transistor” on lines 11-13 is indefinite because it is not clear as to the “ output voltage” or the “voltage signal whose logic level is zero” turns off the transistor.

Claims 3, 5, 7-9, 13 and 15-17 are indefinite because of the technical deficiencies of claims 1 and 10.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Claims 1,4, 5, 10, 12 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Saeki et al. (USP. 6,046,896).

Regarding claim 1, figures 7 and 8 of Saeki show a booster comprising a boosting circuit (Tr1, L1, R1) connected to an AND gate AND1), an oscillator (8, 9), a voltage detector (12, 13, ERA2, R6, R7, IC2, FF) connected to the boosting circuit and to an AND gate (AND1). When the output voltage of the boosting circuit reaches a predetermined voltage, transistor (Tr1) is turned off (col. 23, lines 44-47).

Regarding claims 4 and 12, the “frequency control circuit” is circuit 9 in figure 8.

Regarding claims 5 and 13, the recitation “fuel cell” is merely intended use thus, they do not further limit the limitations of the claims. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex Parte Masham, 2 USPQ F.2d 1647 (1987). Therefore, these limitations have not been given patentable weight.

Regarding claim 10, figures 7 and 8 of Saeki shows a method of boosting battery output, the battery, not shown, electrically connected to a booster comprising a boosting circuit, an oscillator, and a voltage detector, the method comprising:

detecting an output voltage of the booster with the voltage detector (12, 13, ERA2, R6, R7, IC2, FF);

Art Unit: 2816

providing an AND gate (AND1) and an oscillator (8, 9). When the output voltage is lower than a predetermined voltage, transistor (Tr1) is turned on. When the output voltage of the boosting circuit reaches a predetermined voltage, transistor (Tr1) is turned off (col. 23, lines 44-47).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saeki et al. (USP. 6,046,896) in view of Wolaver et al. (USP. 5,627,500).

Regarding claim 3, figure 7 and 8 of Saeki includes all the limitations of this claim except for the limitation that the oscillator is a ring oscillator. Figure 3 of Wolaver shows an oscillator comprising a ring oscillator for providing variable pulses with very high resolution (Abstract). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to replace the oscillator (8, 9) of Saeki with the oscillator taught by Wolaver for providing variable pulses with very high resolution.

Allowable Subject Matter

Claims 6-9 and 14-17 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 6-9 and 14-17 would be allowable because the prior art of records fails to teach or fairly suggest voltage detector comprising a diode, first to third resistors a bipolar junction transistor as called for in claims 6 and 14.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hiep Nguyen whose telephone number is (571) 272-1752. The examiner can normally be reached on Monday to Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hiep Nguyen

02-24-06



**TUANT. LAM
PRIMARY EXAMINER**